Capparis velutina (Capparaceae), a new species from south-eastern Queensland

Paul I. Forster

Summary

Forster, Paul I. (1997). *Capparis velutina* (Capparaceae), a new species from south-eastern Queensland. *Austrobaileya* 5(1): 107–111. *Capparis velutina* (*Capparis* section *Busbeckea* (Endl.) Hook.f.), a new species allied to *C. arborea* (F.Muell.) Maiden, is described and illustrated. Information is provided on its distribution, habitat and conservation status.

Keywords: *Capparis velutina, Capparis arborea*, Capparaceae, Queensland, New South Wales.

Paul I. Forster, Queensland Herbarium, Meiers Road, Indooroopilly, Queensland, 4068, Australia

Introduction

An undescribed species of *Capparis* belonging to *C.* section *Busbeckea* (Endl.) Hook.f. has been recognised to occur in south-eastern Queensland for some time and has been variously referred to as *C.* sp. 'hairy leaves' (unpublished plant lists), *C.* sp. 'Bulburin' (unpublished plant lists), *C.* (P.I.Forster 6620) (Forster et al. 1991) or *C.* sp. (Coen L.S.Smith 11862) (Jessup 1994). This taxon was first formally recognised as *Capparis nobilis* var. *pubescens* Benth. (Bentham 1863) based on a collection by Alan Cunningham from Moreton Bay, but was reduced to synonymy under *C. arborea* (F.Muell.) Maiden by Jacobs (1965), albeit with some doubt.

In the 'Flora of Australia' treatment of *Capparis* by Hewson (1984), *C. nobilis* var. *pubescens* was included in the synonymy of *C. arborea*, but one specimen of this taxon (*McDonald* 3223 et al. (BRI)) was cited as a representative specimen under an entity named *Capparis* sp. A. I believe that Hewson's concept of *Capparis* sp. A covers at least two entities. One appears to be endemic to the McIlwraith Range in far north Queensland and has distinctive elongate fruit and more or less glabrous foliage (e.g. *Smith* 11862), whereas the other is endemic to south-eastern Queensland and north-eastern New South Wales, and has globose fruit and a distinctive velutinous, hairy lower leaf lamina surface. Both taxa have been previously lumped together at BRI with most collections being sterile or with only buds.

Unfortunately, no additional fertile collections of the taxon from the McIlwraith Range have been made since that of Smith, hence it remains unnamed for the time being and retains the code name of *C.* sp. (Coen L.S.Smith 11862). Recent fertile collections of the second species now enable its formal description and it is named here as *C. velutina*.

Materials and methods

This paper is based on specimen holdings at BRI and QRS, type material at BM, and field observations by the author. Terminology and structure of the description largely follow Jacobs (1965).

Abbreviations: T.R. = Timber Reserve; S.F. = State Forest, L.A. = Logging Area.

Taxonomy

Capparis velutina P.I.Forst., **sp. nov.** affinis *C. arborea* (F.Muell.) Maiden autem planta volubili scandentive caulibus floriferis spinosis, folio lamina infra velutina mucrone 1–2 mm longo venis lateralibus infra prominenter elavatis praedita, sepalis interioribus angustioribus 4.0–6.5 mm latis differt. **Typus:** Queensland. PORT CURTIS DISTRICT: State

Accepted for publication 20 June 1997

Forest 391 Bulburin, Resumption Logging Area, 29 Dec 1994, *P.I.Forster* PIF16004, + *G.Smyrell, M.C.Tucker & D.Orford* (holo: BRI [2 sheets + spirit]; iso: A, K, L, MEL, NSW, QRS).

Capparis nobilis var. *pubescens* Benth., Fl. Austral.1:96 (1863). **Type:** Queensland. MORETON DISTRICT: Brisbane River, *A. Cunningham* (holo: BM [000031692] labelled as 'Capparis laurifolia' in Cunningham's hand).

Scrambler or vine up to 20 m long; trunk woody and up to 10 cm diameter. Juvenile shoots, 1st and 2nd stages: twigs with short, dense, simple, erect, brownish hairs of unequal length, internodes 7–20 mm long. Thorns acicular, straight, patent to sometimes divaricate, 2–10 mm long. Leaves distichous, petioles 1–2 mm long, lamina ovate, 15–50 mm long, 12–25 mm wide, apex acute to acuminate, mucronate (mucro 1–2 mm long), base cordate, rounded or truncate, coriaceous; upper surface glabrous, dark glossy green, lower surface velutinous with sparse, erect, brownish hairs; lateral veins 4–7 pairs, raised below, interlateral reticulate veins ± obscure. Adult shoots: twigs with short, dense, simple, erect to slightly antrorse, brownish hairs of unequal length; internodes 10–20 mm long. Thorns usually present, recurved, 1–4 mm long. Leaves spirally arranged; petioles 3–7 mm long, indumentum as on twigs; lamina elliptic to elliptic-ovate, 25–130 mm long, 20–50 mm wide, apex acute to rounded with a pronounced mucro (this 1–2 mm long), base cordate, cuneate or rounded, coriaceous; upper surface dull-green, glabrous, midrib shallowly sunken; lower surface pale tan, with short, sparse to dense, erect to slightly antrorse, simple brownish hairs, midrib raised, margin often slightly recurved; lateral veins in 7–12 pairs, prominently raised below, interlateral reticulate veins just visible below. Flowers, axillary, solitary, collateral in pairs, or in racemes with a slender rachis up to 12 mm long; bracts small, lanceolate or spine-like; pedicels 17–28 mm long, c. 1 mm diameter, with sparse, antrorse, simple, brownish hairs; flower buds globose, shortly pointed, smooth; outer sepals fused in bud, ± ovate, ± cucullate, 7–11 mm long, 8–11 mm wide, coriaceous, minutely hairy externally; inner sepals free, narrow-obovate, ± flattened, 8–12 mm long, 4–6.5 mm wide, glabrous or minutely and irregularly marginally ciliate, somewhat thickened in middle; petals broadly obovate, 15–25 mm long, 7–10 mm wide, flabellate, cream-white, loosely hairy inside for entire length or mainly in lower half, margin somewhat fimbriate in upper half; stamens 80–100, anthers narrow-oblong, 1.5–1.6 mm long, c. 0.5 mm wide, cream, filaments filiform, 13–15 mm long, cream; gynophore filiform, 10–17 mm long, c. 0.5 mm diameter, cream, glabrous, ovary ovoid, 2–3 mm long, 1.8–2.0 mm diameter, glabrous, green, stigma inconspicuous. Fruit on a stipe 10–15 mm long, globose, incrassate, 35–40 mm diameter; seeds c. 5 mm long (immature). *Hairy caper.* Fig. 1.

***Selected additional specimens examined*: Queensland.** PORT CURTIS DISTRICT: 2.5 km N of Glassford Vale, T.R. 353, 24°34'S, 151°18'E, Sep 1989, *Forster* 5678 & *Bean* (BRI); S.F. 471, Mt Coulston, 24°11'S, 151°26'E, Oct 1989, *Forster* 5810 & *Bean* (BRI); Resumption L.A., S.F. 391 Bulburin, 24°32'S, 151°28'E, Dec 1993, *Forster* 14542 et al. (BRI); Scott Road, 4 km from old barracks site, Boyne L.A., S.F. 391 Bulburin, 24°32'S, 151°29'E, Dec 1993, *Forster* 14566 (BRI); T.R. 115, Mt Coulston, 9 km NNW of Bororen, 24°11'S, 151°26'E, Sep 1989, *Gibson* TOI814 (BRI, L); S.F. 67 Bulburin, Jul 1978, *McDonald* 2369 & *Stanton* (BRI); S.F. 67 Bulburin, vicinity of Forest Station, Apr 1980, *McDonald* 3223 et al. (BRI); S.F. 67 Bulburin, vicinity of Forest Station, Apr 1980, *McDonald* 3224 et al. (BRI); S.F. 391 Bulburin, vicinity of Forest Station, Nov 1981, *McDonald* 3425 (BRI). WIDE BAY DISTRICT: NW slopes of Mt Glastonbury, 26°14'S, 152°27'E, Dec 1991, *Forster* 9274 & *Sharpe* (BRI); Fireclay Scrub, Wrattens S.F., S.F. 639 Widgee, 26°15'S, 152°19'E, Feb 1988, *McDonald* 4162 (BRI, NSW); Imbil, Jan 1918, *Weatherhead* 381 (BRI). DARLING DOWNS DISTRICT: SW slope of Wilsons Peak, 28°15'S, 152°29'E, Jan 1990, *Forster* 6220 et al. (BRI); Warwick district, Jan 1919, *Moore* 8 (BRI). MORETON DISTRICT: Three Mile Scrub, Newmarket, Jan 1891, *Bailey* [AQ028017] (BRI); 2 km E of Mt Brisbane, Rough L.A., T.R. 209, 27°06'S, 152°33'E, Apr 1989, *Forster* 5038 (BRI, CANB, K, MEL); Nineteen L.A., T.R. 209, Mt Brisbane, 27°06'S, 152°32'E, Jun 1990, *Forster* 6868 et al. (BRI, QRS); Mt Lindesay, 28°20'S, 152°42'E, Oct 1992, *Forster* 12183 & *Leiper* (BRI); Blackall Range, Apr 1918, *White* [AQ028016] (BRI). **New South Wales.** Acacia Creek, Feb 1905, *Boorman* [AQ027999] (BRI ex NSW).

***Distribution and habitat*:** *Capparis velutina* is endemic to south-eastern Queensland and north-eastern New South Wales from

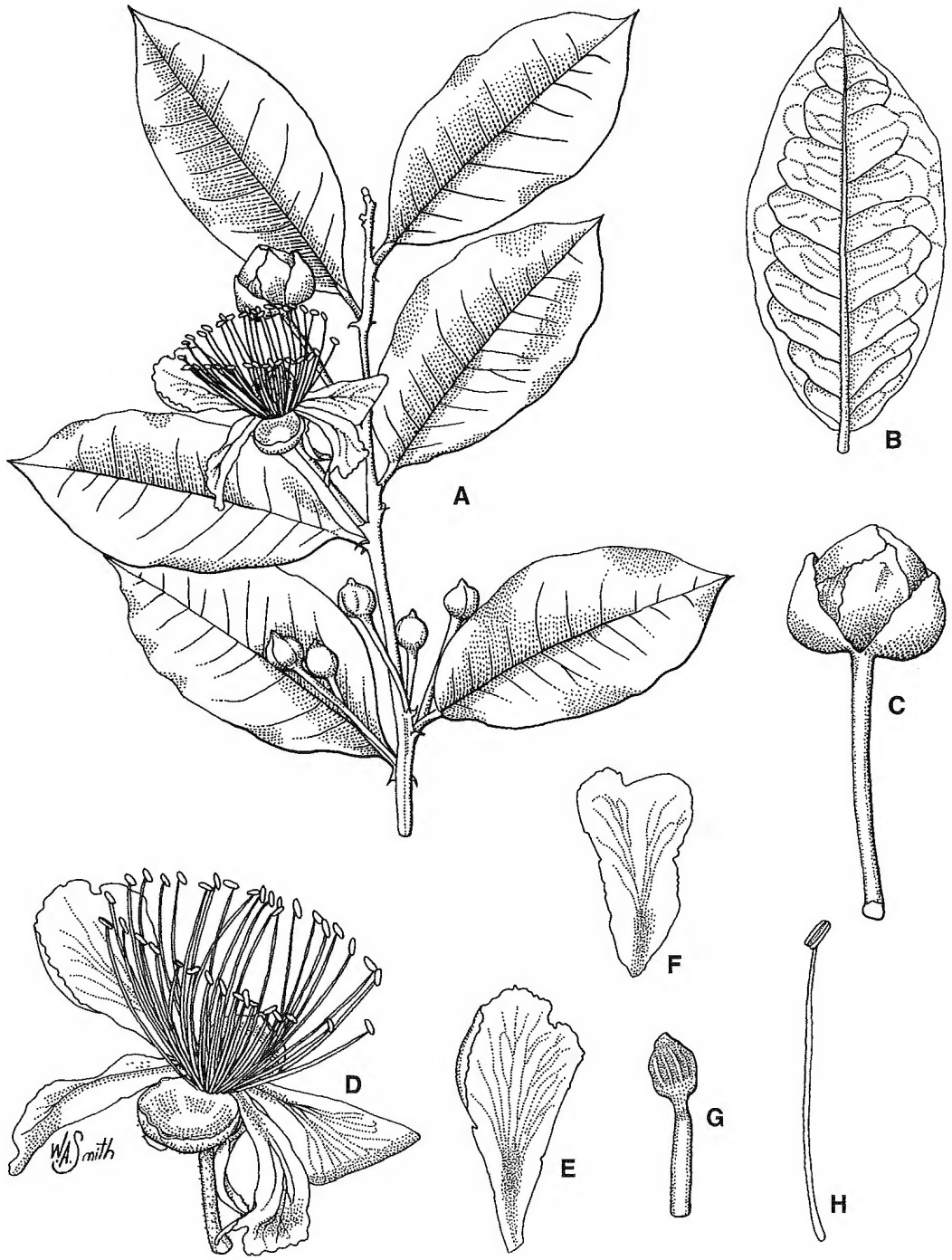
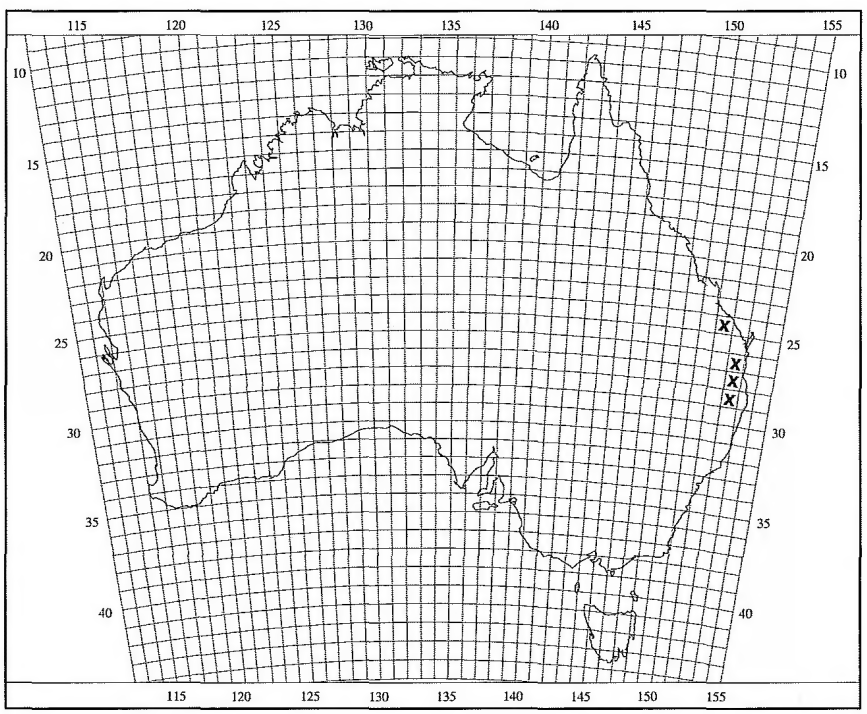


Fig. 1. *Capparis velutina.* A. flowering branchlet × 0.8. B. undersurface of leaf showing venation × 1. C. bud just before anthesis × 1.5. D. lateral view of flower × 1.5. E-F. petals × 1.5. G. style × 5. H. stamen × 2. All from *Forster* 16004 (BRI). Del. W. Smith.

Mt Coulston in the north to Acacia Creek in the south (Map 1). According to Floyd (1989) this species occurs from the Macleay River north to Acacia Creek in New South Wales. I have not seen any specimens to support this statement.

Capparis velutina occurs in complex notophyll vineforest (usually araucarian) often on red soils derived from rhyolite or related rock substrates. These vineforests are often dominated by species of *Argyrodendron* and *Araucaria cunninghamii.*

***Notes*:** *Capparis velutina* appears to be allied to *C. arborea* and they occur sympatrically at many localities. Maiden & Betche (1905), when discussing *C. nobilis* var. *pubescens*, noted that it differed from *C. arborea* (as *C. nobilis*) in the climbing habit, smaller flowers with pale blue stamens, and the branches and underside of the leaves densely covered with short soft hairs. With the greater number of specimens now available, it is now possible to state that the two taxa differ in many character states. Major differences are summarised in Table 1. As well as these differences, *C. velutina* also appears to have smaller flowers (supporting Maiden & Betche's observations) and broader, thicker leaves than *C. arborea*, but I have not observed pale blue stamens.



Map 1. Distribution of *Capparis velutina* in 1° grid squares.

Table 1. Morphological comparison of *Capparis arborea* and *C. velutina*.

Character	*C. arborea*	*C. velutina*
habit	shrub/small tree	scrambler or vine
flower bearing stems	spineless	spinose
leaf lamina undersurface	glabrous	velutinous hairy
leaf lamina mucro	short (< 1 mm)	long (1–2 mm)
leaf lamina lateral veins below	indistinct	prominently raised
inner sepal width	8–11 mm	4.0–6.5 mm

Specimens of *Capparis* are renowned for being difficult to identify and the only real solution to this is to use adequate fertile material. However, *Capparis velutina* is relatively easy to identify, even from sterile collections, due to the distinctive velutinous, hairy lower leaf lamina. In Hewson's (1984) key to the Australian taxa of *Capparis*, *C. velutina* will key to *C. arborea* but may be distinguished by the characters outlined above.

Floyd (1989) referred to this plant as 'var. pubescens' under his account of *C. arborea*; however, no formal combination of Bentham's variety under that species name has ever been made.

***Conservation status*:** *Capparis velutina* is known to occur in at least thirteen localities, including three conservation reserves (Forster et al. 1991). It is usually relatively common where it does occur and none of the known localities are under any direct threat for the present. Hence, while it is not a particularly common plant, it should not be considered as rare or threatened.

***Etymology*:** The specific epithet is derived from the Latin *velutinus* (velutinous) and alludes to the distinctive indumentum cover on the lower surface of the leaf lamina.

Acknowledgments

W.Smith (BRI) for the illustrations. A.R.Bean, L.H.Bird, D.Orford, P.R.Sharpe, G.Smyrell and M.C.Tucker for assistance in the field on occasions when this plant has been collected. L.Pedley (BRI) for the Latin translation. A.RBean for comments on a draft of the manuscript. The Director, Dept Botany, Natural History Museum (BM), for loan of relevant material.

References

BENTHAM, G. (1863). Capparidae. In *Flora Australiensis* 1: 89–98. London: L. Reeve & Co.

FLOYD, A.G. (1989). *Rainforest Trees of Mainland South-eastern Australia.* Melbourne/Sydney: Inkata Press.

FORSTER, P.I., BOSTOCK, P.D., BIRD, L.H. & BEAN, A.R. (1991). *Vineforest Plant Atlas for South-east Queensland.* Brisbane: Queensland Herbarium.

HEWSON, H.J. (1984). Capparaceae. In A.S.George (exec. ed.), *Flora of Australia* 8: 207–231.

JACOBS, M. (1965). The genus *Capparis* (Capparaceae) from the Indus to the Pacific. *Blumea* 12:385–541.

JESSUP, L.W. (1994). Capparaceae. In R.J.F.Henderson (ed.), *Queensland Vascular Plants, Names and Distribution.* Brisbane: Queensland Department of Environment & Heritage.

MAIDEN, J.H. & BETCHE, E. (1905). Notes from the Botanic Gardens, Sydney. *Proceedings of the Linnean Society of New South Wales* 30: 354–375.